

## CLAIMS

What is claimed is:

1. A method to implement policy-based network traffic management, the method including:  
  
receiving first data pertaining to a network device at a network traffic manager, the first data being received out-of-band of network traffic;  
  
extracting second data from the network traffic; and  
  
implementing a network traffic management policy at the network traffic manager utilizing the first and second data.
2. The method of claim 1 wherein the first data is associated with the network traffic by being communicated to the network traffic manager out-of-band during a keep-alive session pertaining to the network traffic.
3. The method of claim 1 wherein the first data comprises data concerning network access rights of a user of the network device.
4. The method of claim 3 wherein the network access rights are specified as a bandwidth allocation.

5. The method of claim 4 wherein the bandwidth allocation is expressed in terms of a community membership.

6. The method of claim 1 wherein the first data comprises data concerning network access requirements of the network device.

7. The method of claim 6 wherein the network access requirements are of an application executing on the network device.

8. The method of claim 1 wherein the first data is received from a client application executing on the network device.

9. The method of claim 8 wherein the first data includes an information profile concerning the network device.

10. The method of claim 8 wherein the first data includes network traffic conditions at the network device.

11. The method of claim 1 wherein the first data is received from a registry within which data pertaining to multiple network devices is stored.

12. The method of claim 1 wherein the first data is communicated on a periodic basis from the network device as part of a keep-alive protocol.

13. The method of claim 1 wherein the first data identifies a work group to which the network device belongs.

14. The method of claim 1 wherein the second data extracted from the network traffic is identified by a classification rule accessed by the network traffic manager.

15. The method of claim 14 wherein the second data is extracted from any one of a group of network traffic types including a packet, a cell and a frame.

16. The method of claim 14 wherein the classification rule is received at the network traffic manager from a network administrator.

17. The method of claim 1 including receiving third data pertaining to a physical characteristic of a network connection device at which the network traffic is received, and implementing the network traffic management policy utilizing the third data.

18. The method of claim 17 wherein the physical characteristic includes a port of the network connection device on which the network traffic is received.

19. The method of claim 1 including receiving fourth data pertaining to a context of receipt of the network management traffic at a network connection device, and implementing the network management policy utilizing the fourth data.

20. The method of claim 19 wherein the context includes a time of day at which the network traffic is received at the network connection device.

21. The method of claim 1 wherein the implementing of the network traffic management policy includes any one of routing, switching or bridging the network traffic.

22. The method of claim 1 wherein the implementing of the network traffic management policy includes classifying the network traffic according to at least one classification rule associated with the network management policy.

23. The method of claim 1 wherein the implementing of the network traffic manager policy includes forwarding the network traffic as one or more distinct flows.

24. The method of claim 23 wherein the distinct flows are attributed varying QoS levels, and the QoS level attributed to each distinct flow is determined

according to a classification of network traffic comprising each respective discrete flow.

25. The method of claim 1 including communicating a message from the network traffic manager to an application executing on the network device from which the network traffic is received, the message including information regarding a policy decision made regarding network traffic received by the network traffic manager device.

26. A system to implement policy-based network traffic management, the system including:

a profile to receive and store first data pertaining to a network device for access by a network traffic manager, the first data being received out-of-band of network traffic;

the network traffic manager to extract second data from the network traffic and to implement a network traffic management policy utilizing the first and second data.

27. The system of claim 26 wherein the first data is associated with the network traffic by being communicated to the network traffic manager out-of-band during a keep-alive session pertaining to the network traffic.

28. The system of claim 26 wherein the first data comprises data concerning network access rights of a user of the network device.

29. The system of claim 28 wherein the network access rights are specified as a bandwidth allocation.

30. The system of claim 29 wherein the bandwidth allocation is expressed in terms of a community membership.

31. The system of claim 26 wherein the first data comprises data concerning network access requirements of the network device.

32. The system of claim 31 wherein the network access requirements are of an application executing on the network device.

33. The system of claim 26 wherein the first data is received from a client application executing on the network device.

34. The system of claim 33 wherein the first data includes an information profile concerning the network device.

35. The system of claim 33 wherein the first data includes network traffic conditions at the network device.

36. The system of claim 26 wherein the first data is received from a registry within which data pertaining to multiple network devices is stored.

37. The system of claim 26 wherein the first data is communicated on a periodic basis from the network device as part of a keep-alive protocol.

38. The system of claim 26 wherein the first data identifies a work group to which the network device belongs.

39. The system of claim 26 wherein the second data extracted from the network traffic is identified by a classification rule accessed by the network traffic manager.

40. The system of claim 39 wherein the second data is extracted from any one of a group of network traffic types including a packet, a cell and a frame.

41. The system of claim 39 wherein the classification rule is received at the network traffic manager from a network administrator.

42. The system of claim 26 wherein the network traffic manager is to receive third data pertaining to a physical characteristic of a network connection device at which the network traffic is received, and to implement the network traffic management policy utilizing the third data.

43. The system of claim 42 wherein the physical characteristic includes a port of the network connection device on which the network traffic is received.

44. The system of claim 26 wherein the network traffic manager is to receive fourth data pertaining to a context of receipt of the network management traffic at a network connection device, and to implement the network management policy utilizing the fourth data.

45. The system of claim 44 wherein the context includes a time of day at which the network traffic is received at the network connection device.

46. The system of claim 26 wherein the implementing of the network traffic management policy includes any one of routing, switching or bridging the network traffic.

47. The system of claim 26 wherein the network traffic manager is to classify the network traffic according to at least one classification rule associated with the network management policy.



48. The system of claim 26 wherein the network traffic manager is to forward the network traffic as one or more distinct flows.

49. The system of claim 48 wherein the network traffic manager is an attribute varying QoS levels to the distinct flows, and the QoS level attributed to each distinct flow by the network traffic manager is determined according to a classification of network traffic comprising each respective discrete flow.

50. The system of claim 26 wherein the network traffic manager is to communicate a message to an application executing on the network device from which the network traffic is received, the message including information regarding a policy decision made regarding network traffic received by the network traffic manager device.

51. A system to implement policy-based network traffic management, the system including:

first means for receiving and storing first data pertaining to a network device, the first data being received out-of-band of network traffic;

second means for extracting second data from the network traffic and  
for implementing a network traffic management policy utilizing the  
first and second data.

52. The machine-readable medium storing a sequence of instructions  
that, when executed by a machine, cause the machine to perform a method for  
implementing policy-based network traffic management, the method including:

receiving first data pertaining to a network device at a network traffic  
manager, the first data being received out-of-band of network traffic;

extracting second data from the network traffic; and

implementing a network traffic management policy at the network traffic manager  
utilizing the first and second data.